

REMARKS

Claims 1, 3, 5, 6 and 8 - 11 are now in the case.

Canceled Claims 12 - 16 are directed to inventions the Examiner deems distinct from that set forth in originally presented Claims 1 - 11.

Applicant elects without traverse the apparatus claims of Group I, now Claims 1, 3, 5, 6 and 8 - 11, of course reserving the right to file divisional applications directed to the method and nib of Groups II and III, respectively.

Before discussing the claims remaining in this application, applicants would first like to discuss generally the invention covered thereby.

The present invention relates to apparatus for applying liquid in a controlled and precise manner to the surface of an edible food even when the surface is wet and/or very soft, such as wet frosting. Traditional writing instruments such as pens and markers, including felt tip markers, cannot effectively apply a liquid to soft frostings or other soft surfaces. For example, if one wishes to decorate the surface of a freshly frosted cookie or cake, a pencil will not work. Similarly, ball point pens and felt-tip markers will also fail. Failure is manifested primarily in two modes. First, the soft frosting may not provide sufficient support to permit satisfactory transfer of the writing agent from the tip of the writing instrument. For pencils and

ball point pens to function properly, a certain amount of friction must exist between the writing tip and the surface to be written upon. With very soft substrates, this degree of friction does not exist. Second, the relatively hard tips of conventional markers and other conventional writing instruments will gouge and deform very soft substrates, such as for example, fresh frosting.

Extensive research activities carried out by applicants confirms the above. Applicants, when faced with these problems, attempted without success to find any commercially available nib structure providing desired performance. As will be pointed out in greater detail below, such inadequate prior art nibs are exemplified by the arrangements set forth in the prior art cited by the Examiner in the Office Action. Not only do existing nib products provide intermittent and poor fluid transfer to soft substrates, but the substrates during tests conducted by applicants' suffered significant deformation and damage due to the relatively high forces exerted on the substrate by the nibs in these products. Additionally, it was difficult to accurately control the position of the nibs of the commercially available products tested relative to the soft frosting substrate. The superior performance of applicants' invention as disclosed and presently claimed herein is the end result of particular characteristics of the unique nib and its associated hand held container.

Claim 1 is the sole independent claim currently in this case and such claim has been substantially amended to recite structure and cooperative relationships not taught or suggested by the art of record, whether taken alone or in combination.

Claim 1 now recites an elongated, elastic, highly flexible nib of integral construction formed of open cell foam material of high hydrophilicity connected to the hand held container of the apparatus.

The claim states that the nib has a porous distal end, a porous nib shaft side wall and a nib interior defining voids in fluid flow communication with the interior of the container and with the pores of the porous distal end and the porous nib shaft side wall. Liquid decorating substance received by the nib interior is conveyed to the porous distal end and the porous nib shaft side wall.

The claim states that the nib readily laterally flexes when in contact with the edible food prior to the force applied by the nib to the edible food substantially exceeding the instantaneous yield point of the edible food at the location thereon engaged by the nib when pressure is exerted on the edible food by the nib to substantially prevent deformation of the edible food even when the edible food is soft and the pressure exerted is slight during application of the liquid decorating substance to the edible food by the apparatus.

Claim 1 now states that flexing of the nib is operable to bring the porous nib shaft side wall into engagement with the edible food and substantially conform to a surface of the edible food whereby the liquid decorating substance passes through the porous nib shaft side wall and is applied to the edible food by the porous nib shaft side wall when the nib is pulled along the surface of the edible food. It is also set forth that the nib flexes and weather vanes responsive to changes in the direction of the nib as it is pulled along the surface of the edible food in engagement therewith.

Claim 1 further sets forth that the nib utilizes capillary action to carry liquid decorating substance from the nib interior to the outer surface of the porous nib shaft side wall and porous distal end to replace liquid decorating substance transferred from the nib to the edible food and to maintain a high fluid level at both the porous distal end and the porous nib shaft side wall.

Claim 1 further states that the nib is responsive to withdrawal of the nib from contact with the edible food to return to its undeflected condition.

As described in detail in the application specification, the various features set forth in Claim 1 in its present form combine to provide superior liquid transfer performance onto a soft substrate for decorating or other

purposes. Such an arrangement is certainly not obvious and it is not taught or suggested by the art of record, whether taken alone or in combination. The specification provides details of the extensive testing required by applicants' in order to develop an apparatus achieving the desired results.

Claim 1, as originally presented, was rejected under 35 U.S.C. 103(a) as being unpatentable over Naor et al in view of Kiryu, Sailor Pen, Shion Kagaku, two Pentel references, Knable, Wagner Pelikan, or Kiryu et al etc. in view of Naor et al, both further in view of Williamson.

The patent to Naor et al relates to a capillary feed marking instrument capable of producing edible colored indicia directly on a food substrate. Naor et al also alleges that the markers disclosed may be used to decorate frosting and/or icing or even employed to write on whipped cream or frosting without bleeding. The problem, however, is that Naor et al does not actually disclose structure which could satisfactorily perform in such a manner. There is no teaching or suggestion in Naor et al that the marker nib flexes. Naor et al states that suitable marking tips for use in the marking markers of the invention are fibrous nibs made of felt, polyester or nylon for controlled release of the edible coloring composition. Fibrous marking tips of the type employed by Naor et al apparently can suitably be of any commercially available type. However, commercially available

nibs, such as that proposed for use by Naor et al, do not work satisfactorily to deposit a liquid decorating substance to frosting or other soft material. As pointed out above, failure is manifested in the inability of the soft frosting or other substrate to provide sufficient support to permit satisfactory transfer of the writing agent. Furthermore, relatively hard tips of conventional felt tip or other writing instruments will gouge and deform very soft substrates.

Naor et al does not suggest the claimed feature that the nib readily laterally flexes when in contact with the edible food prior to the force applied by the nib to said edible food substantially exceeding the instantaneous yield point of the edible food at the location thereon engaged by the nib.

Furthermore, there is no teaching in Naor et al that flexing of the nib is operable to bring the porous nib shaft side wall into engagement with the edible food with the porous nib shaft side wall substantially conforming to the engaged surface of the edible food whereby the liquid decorating substance passes through the porous nib shaft side wall and is applied to the edible food by the porous nib shaft side wall when the nib is pulled along the edible food surface.

Nor does Naor et al suggest that the nib flexes and laterally deflects to weather vane responsive to changes in the direction of the nib as it is pulled along the edible food

surface in engagement therewith. Since Naor et al does not even suggest that the nib is flexible it obviously does not, as recited in Claim 1, return to its original undeflected condition responsive to withdrawal of the nib from the edible food.

The patents to Kiryu, Sailor Pen, Shion Kagaku, the two Pentels, Knable and Wagner Pelikan fail to remedy the deficiencies of Naor et al as a reference.

The Examiner states that it is notoriously old in the art to provide markers with foamed nibs and specifically, open celled foam nibs, which foam nibs "will inherently be flexible." This is not correct. In fact, many types of foams are rigid, even when soaked in water. In any event, these patent publications pertain to instruments for writing on conventional, relatively hard surfaces, such as paper. There is no teaching or suggestion whatsoever that the arrangements are appropriate or even suitable for the purpose of applying a liquid decorating substance to an edible food while not substantially deforming the edible food even when the edible food is soft and the pressure exerted is slight during application of the liquid decorating substance to the edible food.

Kiryu discloses a "hard wearing" nib for implements using rapid drying ink such as pens, marking pens, etc. There is no teaching of nib flexibility. Sailor Pen discloses a writing nib for a fountain pen which is of specialized construction for

use when doing calligraphy. There is no suggestion that such an arrangement can be used for, or is suitable for, applying a liquid decorating substance to a soft edible food product.

Shion Kagaku relates to a fibrous pen tip formed by connecting cotton yarn with spongy material. There is no suggestion whatsoever in this reference of a device suitable for use when applying a liquid decorating substance to a soft edible food product.

The two Pentel developments relate to a specific ink composition and a pen point of a standard writing instrument produced in a specific manner. There is no suggestion whatsoever that the items which are the subject matter of the Pentel references are suitable for use in the manner of applicants' device. The ink is not appropriate for such purpose nor is there any suggestion that the pen point is flexible or in any other way suitable for use to apply the material to a soft food substrate.

Knable relates to a specific ink used in a writing pen or other liquid applicator instrument. A foamed nib is mentioned as one possibility but there is no teaching or suggestion of a nib of the specific nature set forth in Claim 1.

Wagner Pelikan discloses a pen tip of porous material with parallel capillary tubes inside it, the tubes being prefabricated and of plastic, glass, ceramic metal or other suitable material. These tubes function as stiffeners and the

Wagner Pelikan device would appear to be completely unsuited for the use for which applicants' apparatus was designed.

Williamson relates to a stamp and it is not seen how the reference has any relevance to applicants' claimed invention. Williamson suggests use of a resilient foam marking surface on a stamp but the image produced thereby is caused by conventional stamp up and down motion. There is no lateral movement of the Williamson device relative to the item being stamped since it has a predetermined image formed without sliding the stamp along a surface. Furthermore there is no teaching that the material could be useful for writing or otherwise forming a non-stamped design on a soft food surface. Sliding movement would obviously cause gouging and smearing.

It is not seen how the many references applied by the Examiner can properly be combined. The situation is one of quantity, not quality, insofar as citation of these references is concerned. The combinations proposed are failed attempts at hindsight reconstruction of applicants' claimed apparatus. It is submitted that Claim 1, as currently amended, clearly patentably defines over the cited and applied prior art, whether taken alone or in combination.

Claim 3 depends from Claim 1 and thus incorporates by reference all of the structure of that parent claim. Claim 5 depends from Claim 3. While open cell foam material in the form

of acetalized polyvinyl alcohol to perform interstitial cells accommodating a liquid per se may not be patentable, it is submitted that such feature is in fact patentable when incorporated as part of a novel overall combination employed for a specific purpose and of a specific construction as set forth in the parent claim.

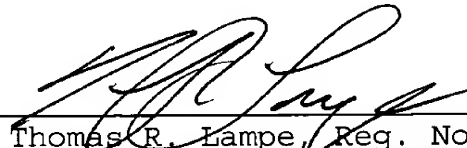
The shape of the nib set forth in Claim 6, the porosity range of the open cell foam material set forth in Claim 8, the average pore size set forth in Claim 9, the water absorption rate set forth in Claim 10 and the pore size distribution set forth in Claim 11 are important and not mere matters of choice since they have been found to contribute to the operation of the apparatus to perform in a desired manner with regard to application of a liquid decorating substance to a soft edible food. These structural limitations and parameters were established after considerable experimentation by applicants and there is no teaching of these features in the prior art when incorporated as part of the novel overall combination of Claim 1 from which Claims 6, 8, 9, 10 and 11 depend either mediately or immediately. These characteristics make significant contributions to operation of applicants' claimed apparatus.

The art cited but not applied has been carefully studied and is not believed to be relevant to applicants' invention as currently claimed.

Passage of this case to issue is believed to be in
order and such action is earnestly solicited.

Respectfully submitted,

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